

# **STUDIES IN RURAL INDUSTRIALISATION**

**Issues, Data Requirements and Analysis**

( A study sponsored by the Indian Council of  
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## PREFACE

The present paper primarily aims at indicating the types of issues that need to be examined in a policy oriented research programme on rural industrialisation, outlining the data requirements for this purpose and assessing the adequacy and suitability of data from some important sources. In the process we have also discussed the rationale behind the emphasis on rural industrialisation, examined approaches and policies and programmes in this respect and analysed some of the available data with a view to indicating determinants of the extent and performance of industrial activity in rural areas.

The study was undertaken on the initiative of Rural Industrialisation Sub-Committee of the Indian Council of Social Science Research. The Sub-Committee had desired us "to prepare a survey paper based on material available with the Agro-Economic Research Centres, State Bureaus of Economics and Statistics and other official agencies" (excluding KVIC and Handicraft Board on which a separate study was envisaged). Our efforts to include the latter two sources, however, proved infructuous. First, they hardly seem to have undertaken any study in this field. Second, we could not get information on studies, if any, undertaken by them through correspondence, and resources at our disposal did not permit a thorough search for material from them on the basis of approaching them at their locations. Our assessment of analysis of data had, therefore, to be confined to the material available from the village studies of the AERCs.

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The rationale for emphasis on rural industrialisation in the development policy in India lies primarily in the following objective conditions. First, agricultural growth, even if rapid to the feasible extent, is unlikely to be able to provide productive employment to all the labour force in the rural areas. Second, underemployment among those engaged in agriculture would continue to be a feature of rural employment pattern due to the very nature of agricultural activities. Third, the organised industrial sector, mainly concentrated in urban areas, has not been growing fast enough to absorb the growing labour force in the cities, let alone the rural workers migrating to seek work in the urban industrial sector. As a result, a large part of the rural labour force is either unemployed for most part of the year, or then, earns very low incomes although engaged in some work or the other for most of the year. Diversification of rural economy, therefore, seems essential for the increase in employment and incomes, particularly of the relatively disadvantaged groups of small holders and landless labourers. Development of industrial activity in the rural areas seems the only obvious method of achieving such a diversification.



### Approaches to Rural Industrialisation

Rural industrialisation thus becomes as much an essential ingredient of rural development strategy as industrialisation as such is of the development strategy for the country. But just as there are more than one ways of approaching the industrialisation of the economy as a whole, rural industrialisation can also be viewed in several ways. Just as the industrialisation issue in India has been a matter of continuing controversy and debate to the extent there are apparently conflicting viewpoints on the role of large and modern industries on the one hand and small and traditional industries on the other, the issue of rural industrialisation could also be approached at least in two different ways. One could treat the issue as a part of the problem of location and spatial diversification of manufacturing activity, and argue that spatial concentration of industrial activities in large urban centres is not conducive to an equitable pattern of growth, and, therefore, emphasis should be laid on diversification of industries into smaller towns, backward areas and villages. The questions that need to be examined in this context are : What are the reasons for which industrial activity does not get located in these areas? And, how to create necessary conditions to make these places

attractive for industrial location? Still, it may not be possible to divert all new industries to these areas due to the agglomeration and concentration economies which are extremely important for some industries. Then the next question relates to the selection of the type of industries which provide such locational flexibilities as to get themselves advantageously located in small towns and villages. Further, the lumpiness of investment and indivisibilities characterising the necessary infrastructure and services facilities may limit the extent to which industries could be spread so as to be located in each of the villages; appropriately selected centres may well serve as the nucleus of industrial activities to generate the employment and income effects to villages through backward and forward linkages.

The other approach to rural industrialisation, which is most often adopted in India, views it not as a problem of industrial development of non-industrial areas including villages through diversification of location of industries, but mainly as a programme of protecting and developing traditional village industries. In this approach the cottage industries and traditional crafts, are quite often projected as part of the glorious tradition, and therefore, deserving special care for their preservation and growth. In this perspective, development of rural industries some-

times attains the character of an article of faith; and, the programmes for this purpose are not necessarily based on an objective and scientific assessment of their role in development. Consequently, attention hardly gets paid to the possibilities of modernisation of rural economic structure by introducing modern and dynamic products for manufacture in the rural areas. Even when it was recognised that the large scale modern industrialisation is essential for the rapid development of the country, the need for protection and development of cottage industries in the villages was also vigorously emphasised side by side heavy and large scale industries in the urban areas. The two facets of the policy were, however, pursued virtually independently of each other. This was probably done realising the needs of rapid development on the modern lines on the one hand, and of paying lip service to the faith Gandhi had expressed in village industries.<sup>1</sup>

The emphasis on traditional rural industries as the central element in the strategy for rural industrialisation is based on a number of economic as well as social considerations. Using available traditional skills and

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<sup>1</sup>"Our villages are on the verge of destruction owing to the disappearance of village industries. They can be revived only by a revival of village industries". See, Mohandas Karamchand Gandhi, Rebuilding Our Villages, Navjivan Publishing House, Ahmedabad 1952, p.4 quoting from Harijan, March 25, 1939.



requiring little capital, they provide suitable employment to the rural households, ~~without~~ involving any dislocation and migration costs. They use more labour per unit of capital as well as output as compared to modern industries; and their operations can be adjusted to suit the fluctuations in labour requirements of agricultural sector. Another, presumably, favourable feature of these industries is that they provide self-employment, which, according to a viewpoint, is the most desirable form of employment, free from exploitation which is a characteristic feature of wage labour. It has also been argued that "the principle of self-employment is at least important to successful democracy as that of self-government".<sup>2</sup> Sometimes self-employment is considered to be the best way for full development of a person; the Evaluation Committee of the Khadi and Village Industries Commission accordingly stated: "If employment is to fulfil the purpose for which it is sought, namely to provide opportunities for the full development of the personality of the

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<sup>2</sup>Government of India, Report of the Village and Small Scale Industries Committee, New Delhi, 1955, p.22.



worker, it must be as far as possible self-employment. The worker should be his own master either as an independent artisan (family) or as a member of self-governing cooperatives".<sup>3</sup> Some observers have often referred to self-employment as a unique solution to the problem of development.<sup>4</sup>

### The Policy

As a consequence of the implicit acceptance of the above line of arguments in policy making quarters, the policies and programmes for the development of rural industries have been characterised by two important features. One, the possibility of introducing modern small-scale industries into the rural areas has not been fully explored in all its aspects. Two, the development of the village industries has been sought to be achieved mainly through protective measures, without their being accompanied by serious efforts to improve

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<sup>3</sup>Government of India, Intensive Area Scheme of Rural Development, Khadi and Village Industries Commission, New Delhi, 1958, p.10.

<sup>4</sup>Myrdal, G., Asian Drama, Vol.II, Penguin Books, 1968, p.1211.

technology and productivity of these industries. Most of the time it seems to have been assumed that there is nothing basically deficient in the technology and productive capabilities of rural industries; their problems primarily lie in their incapacity to market their products competitively with the products of urban units. Common production programme, reservation, quotas and tax differences are programmes which illustrate the approach to the development of these industries. Where it is found that the problems of rural and traditional industries lie in their technology vis-a-vis the technology of urban organised units, reservation in production and even doing away with the mechanised techniques of production have been recommended as measures of protection. Thus, the First Five Year Plan clearly suggested that mechanised units should not be encouraged to develop for rice pounding which is done manually in the villages providing substantial employment.<sup>5</sup> In the production of edible oil reservation was recommended for the village industries.<sup>6</sup> The reservation in the sphere of textile

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<sup>5</sup>First Five Year Plan, p.318.

<sup>6</sup>Ibid.

production for handloom sector is another outstanding example of the approach.

At some stage it was, no doubt, recognised that though cottage, village and small industries are important sources of output and employment growth, for the effective utilisation of opportunities offered by them, it is necessary to think in terms of integrated programmes of production covering factories as well as small units of production.<sup>7</sup> The integration of the two sectors was envisaged with a view to providing a degree of assurance of market for small units, and positive assistance through supply of raw material, technical guidance, financial assistance, training, research and organisation for marketing. In effect, however, the main emphasis has been laid on measures as reservation or demarcation of spheres of production for two sectors, non-expansion of the capacity of large scale industry and imposition of a cess on large scale industry. Consequently, the programme of rural and small industry development has remained insulated from the mainstream of industrialisation process going on in the country; and though the protection has been granted to these

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<sup>7</sup>Government of India, Second Five Year Plan, Planning Commission, New Delhi, 1956, p.433.



industries, the necessary conditions for realising the advantages of the protective market conditions have not been provided. No doubt, several organisations have been operating schemes of positive assistance to these industries for number of years. The Khadi and Village Industries Board and other All-India Boards, for example, were established to act as a clearing house of information and experience relating to the progress of cottage industries. To improve the efficiency of cottage and small scale industries efforts have been made to provide technical services, advice and assistance by Small Industry Service Institutes. As regards finance, some part of capital for village and small industries is supplied by state governments under the provisions of that State aid to Industries Act. Medium and long term loans are provided by the State Finance Corporations. A large section of the rural industrial units have, however, remained untouched by the programme of assistance. And many a time the assistance available is not exactly relating to the aspects in which these units are really deficient. Marketing and finance are most often emphasised in the programme of assistance, but no serious efforts have been made to aid the rural units technologically and in improving their productive capacity.



The emphasis on the development of small and rural industries has been renewed with a vigour recently in the various official statements and measures on industrial policy. Some of the important policy measures suggested in this regard are : (i) Whatever can be produced by small and cottage industries must be so produced. The number of products reserved for such industries has been increased from 180 to 500. (ii) Special attention will be given to 'tiny sector' with investment upto one lakh of rupees situated in towns having less than 50,000 population, and villages. (iii) Special legislation will be introduced to give recognition and adequate protection of self-employed in cottage and household industries. (iv) To boost the development for small and cottage industries, Multi-purpose District Industrial Centres would be set up. The District Industries Centres are to provide under a single roof all services and support required by the small and village entrepreneurs through inter-alia supply of machinery, equipment, raw materials, arrangement for credit facilities, marketing, quality control and research and development support. These centres will have a special wing to look after the needs of cottage and household industries. Further, the Industrial Development Bank of India is to have a special wing to deal with the credit requirement of small and

household industries and also to coordinate the entire range of credit facilities offered by other institutions to these industries.

There, however, does not seem to be a clear recognition of the fact that for transforming the employment and output picture for the whole country, the setting up of small and cottage industries has to go beyond the smallest towns, and, special efforts need to be made for spreading of non-agricultural occupations in the rural areas. For encouraging the units of production to use local resources available in the rural area, the small entrepreneur needs the assistance in planning and executing the unit and making available the inputs which are not available in the local markets and also to arrange the marketing of their products. This requires more comprehensive assistance as compared to presently available. Therefore, the District Industries Centres have to be parts of the wider organisation of a very large scale.<sup>8</sup> And for developing the secondary production in the rural area, such organisation has to create special

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<sup>8</sup>Dutta, Bhabatosh, "Small to Big : A Critique of the Industrial Policy Statement", Economic and Political Weekly, Vol.XIII, No.3, January 21, 1978.

infrastructure, which would include the provision of communication, services and information, elementary technical and vocational education, provision of power development, of banking services and the establishment of easily accessible consultancy help regarding the new projects and their operations. All this means the development of effective and efficient public mechanism of state action and intervention on a much larger and extensive scale than practised up-till now. The public distribution system necessary for attaining the objectives will have to engage itself in supplying not only the essential consumer goods, but also essential rural industry inputs, which have to be brought from outside the locality. The marketing organisation will have to be concerned not only with selling what has been produced, but with studying the market patterns and trends and then advising the rural units about the types of articles to be produced.

In the light of the renewed emphasis and envisaged programme of developing industries in rural areas, the need for examining the desirable and feasible pattern of rural industrialisation, identifying factors that hinder the growth of rural industries and ones that help



their growth and efficacy of various measures in relation to the specific aspects, materials, technology, finance, marketing etc., that they cover, has obviously assumed great importance. There is, however, general paucity of information on rural industries to examine these aspects. Our purpose here is to broadly state the issues that need to be examined with a view to evolving a rational and potentially effective programme of rural industrialisation; to assess the available information from some of the important sources relating to rural economy; and, to use the available data for drawing some tentative conclusions and implications.

#### Issues and Propositions

The case for rural industrialisation primarily lies in its capacity and suitability to productively use the unutilised labour force in the rural areas most of which cannot be moved away to urban centres due to the limited capacity of the latter to productively use it, and should not be moved both because most of it may be required in agriculture during some parts of the year and the cost of employing and accommodating labour in the urban areas is much higher than that in the rural areas. Besides, of course, the rural economy needs to be diversified not only for providing full employment to the rural labour



force, but also to generate a higher rate of growth which could be achieved by promotion of industries in the rural areas. These industries would not only contribute to the output produced in rural areas directly but give fillip to other activities including agriculture, through their forward and backward linkages, thus promoting a closer integration of agriculture and industry in the rural economy.<sup>9</sup>

The basic assumption in the employment argument is that the capital requirements of rural industries are low and their output can be enhanced without any substantial increase in investment for capacity expansion. The consideration of the appropriate matching of time pattern of manpower availability out of agriculture with industrial activity, if really important, implies a pattern of rural industries dominantly consisting of traditional and cottage industries.<sup>10</sup> In a way, these considerations limit the scope of rural industrialisation to the traditional village industries and also rule out the possibilities of modernising them to the extent that necessitates additions to capital equipment and change in techno-

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<sup>9</sup>Vyas, V.S. Rural Industrialisation : An Integrated Approach, Economics Series No.10, Karnatak University, Dharwar.

<sup>10</sup>Kurien, C.T., "Small Sector in New Industrial Policy", Economic and Political Weekly, Vol.XII, No.9, March 4, '78.

logy reducing employment potential. It is, therefore, important to examine as to how far the rural industrial scene is dominated by the traditional industries only, what are the factors that have arrested their growth or led to a decline in them; what potential exists to revitalise them; what type of linkages they produce in the village economy and ultimately, whether it is sufficient to concentrate on them from the viewpoint of long term growth and development, or the modern industry may have necessarily to be brought in to cope with the demand pattern and other needs of development.

The factors which are expected to explain the differences in industrial activity in the cottage and household sectors among different rural areas can be viewed from the demand as well as the supply side. On the demand side, the nature of commodity and level of its output depend upon the character and size of the market, which, in turn, depends upon several important factors, of which size of population and purchasing power of people are the most important. On the supply side, there are number of factors, such as cost of raw materials, transport and labour costs, nature of finished products, etc. It has generally been observed that for rural industries, particularly the household industries, the market

is limited due to low purchasing power of consumers. These industries are not in a position to produce the goods, which are in demand from urban affluent sections. On the other hand, it is also difficult for them to produce inputs for agricultural sector, for which there has been an increase in demand due to the introduction of new technology in agriculture. Under such conditions, the size of market for these industries is mainly dependent upon the size of local population. Thus, larger the population of the village, a larger proportion of the rural labour force would be engaged in the cottage and household industries.

The larger population may also, most of the time, mean lower man/land ratio due to which it would be necessary for a sizeable part of the population to seek employment in activities other than agriculture. Although labour supply as such may not be a very important factor in location of industries, in the rural areas the surplus labour situation may compel the workers to depend on already existing rural industries. The skill characteristics of the available labour may, however, be an important factor in determining whether the surplus labour finds its way into industrial activity or not. Once an industry gets going availability of cheap and skilled labour is an



important factor in enabling it to hold its own against all odds.<sup>11</sup> The availability of cheap labour is not a problem in rural areas of the country due to large scale underemployment and unemployment. But this factor might itself induce emergence and expansion of rural industrial activity, provided the available labour force possesses some skill, traditional or otherwise. Some observers feel that in the traditional household industries the continuation of an activity and its productivity is mainly dependent upon the skill and devotion of worker and very little on supplementary factors like tools and implements.<sup>12</sup> In the traditional industries, the skills are passed on hereditarily. Hand spinning and weaving for centuries have provided livelihood to a large part of the population specially in textile production centres. Thus, size of village population on the one hand, and the proportion of it that belongs to the sections with traditional skills in industrial activities are expected to be important determinants of the size and performance of village industries.<sup>13</sup>

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<sup>11</sup>Estale, R.C. and Buchanan, R.O., Industrial Activity and Economic Geography, Hutchinson University Library, London.

<sup>12</sup>Vyas, V.S. and Mathai, George, "Farm and Non-Employment in Rural Areas: A Perspective for Planning", Economic and Political Weekly, Annual Number, Vol.XIII, Nos. 6 and 7, 1978.

<sup>13</sup>Ibid.



The above proposition, however, need not be interpreted to mean that development of agriculture would tend to reduce the extent of industrial activity by using more and more labour into it. A developed agriculture as mentioned earlier would mean greater demand for non-agricultural goods which might induce development of industrial activity. The pattern of demand from well-to-do agriculturists may, however, be different from the one from poor farmers; and, therefore, the industrial activity induced by agricultural development may have a different pattern than the traditional one. Developed agriculture would also induce development of agro-based industries by making raw material available to a larger extent. Thus it looks that higher levels of agricultural development will lead to growth of industries, but the pattern of new demand may not necessa-

3573rily be favourable to the traditional sector. In this context, the traditional rural industries can still hold out as a subsidiary activity mainly of the small landholders and landless population to supplement the income from agricultural work; but may increasingly become less and less adequate as the sole source of livelihood for the market for their product may not expand. It is generally presumed that in most cases the cottage and rural industries constitute a subsidiary activity of the rural households although in a

recent study this hypothesis turned out to be of limited validity.<sup>14</sup> It has been observed that only 2 per cent of rural industries has been operating as secondary activity; in all other cases they make sole activity of the household.

What are the conditions that lead to the existence of a sizeable industrial activity in a village? What are the factors that affect their productivity and income potential? Does the structure of industrial activity have a relationship with the crop pattern in the village, or then, with levels of agricultural incomes? Are the rural industrial activities closely linked with the material and demand conditions of village? These and several <sup>other</sup> questions can provide a starting point of investigation into the nature and character of favourable or unfavourable factors in industrialisation of rural areas. Starting with a village as a unit of analysis, it may be worthwhile to look at inter-village differences in the extent, pattern and performance of industrial activity. Although it is generally observed that rural industrial structure is dominated by agro-based products and items of consumption of

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<sup>14</sup>Papola, T.S., "Rural Industrialisation : Issues and Some Evidence", Studies on Development of Uttar Pradesh, Giri Institute of Development Studies, Lucknow, 1979.

rural population, it has also been noticed that capital and intermediate goods and those not dependent on local raw material are gaining in importance particularly in the non-household sector during the recent decades.<sup>15</sup> The hypothesis that industries using local material and catering to the local demand would provide the most suitable way of increasing employment and incomes of the rural non-agricultural households, therefore, needs re-examination. In fact, there is some evidence to suggest that industries not using local material and not producing for local market are doing much better than the ones based on local material and market. Of course, the availability of local skills, traditional and sometimes improvised to suit the change in demand pattern, has played important role in many of these cases.<sup>16</sup>

The moment the rural industrial structure gets a significant extent of such industries which use non-local material and the non-local market, the question of locational

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<sup>15</sup>Joshi, A., "Structure of Manufacturing Industries" in T.S. Papola et.al., Studies on Development of Uttar Pradesh, Giri Institute of Development Studies, Lucknow, 1979, pp.111,113.

<sup>16</sup>Carpet production and Zari weaving in Varanasi are examples of this type. What is significant to note is that some of the new manufacturing activities which have of late emerged in this area, such as lamp-shade making and wire-knitting, have weaving skill as the basic ingredient. Papola, T.S., op.cit.



factors becomes very important. Transport and other infrastructural facilities assume a special significance. The rural industries of this type inevitably have a tendency to get located in areas nearer an urban centre which has all these facilities or then villages which are near the transport heads would gain most of the industrial activity. Implicit in this trend is the proposition that it would be uneconomical to insist on location of these industries in the villages which are far off from urban areas and transport networks.

The next stage in this process of industrial development where location of units is not based strictly on local material and market but on availability of some skills and nearness to transport network, would be that of localisation of industrial activities in certain areas. The importance of infrastructure and common facilities will lead to the concentration of similar production units in the same location, and spread of industrial activity thinly over villages in remote areas will get further restricted. The issue to be examined in this context is that of the impact the development of industries in this manner can produce in the economies of the villages. To the extent the income and employment linkages produced by this process make a favourable impact on the economy of villages in the area, the

costly alternative of locating industrial units in each of the villages may be given up in favour of a properly planned development of the centres of industrial activities located in the midst of a cluster of a number of villages, thereby taking advantage of the economies that the localisation and concentration may offer.

These are some of the major issues and propositions which need examination. A study covering these and related aspects of rural industrialisation obviously requires detailed data on the type of industrial activity, their organisation--household or non-household--sources of raw material, capital and technology, productivity, employment and incomes generated, finance and marketing besides information on such variables like size of population, labour force, occupational structure, land ownership, cropping pattern, infrastructural facilities, transport, levels of incomes etc., relating to the villages under study. The object of the present paper is not to exhaustively seek answers to the above and other related questions. The main problem for such an exercise is the paucity of information on the rural industries. The limited task of this paper is to outline the data needs of such an examination against the background of above mentioned and related propositions which need to be investigated to

answer the questions posed and then to assess the extent and adequacy of information from a single source, namely, village surveys conducted by Agro-Economic Research Centres, in this context. A limited attempt has also been made to examine some of the relationships between the extent and health of rural industries and certain socio-economic variables on the basis of inter-village comparisons.

### Requirements of Data

The data required for a comprehensive and useful study on rural industrialisation can conveniently be grouped into two blocks : village variables and the characteristics of industrial activity. It may be worthwhile to set out in somewhat detail here the broad outlines of the data requirements on each of these two aspects. This would provide some basis for assessing the adequacy of data available in the village studies of Agro-Economic Research Centres subsequently.

### Block : I : Village Characteristics

- A. Population Structure : Size of population, age-sex distribution, persons belonging to scheduled castes, particularly, carrying on traditional village crafts.



- B. Occupational Structure : Participation rate, employment and unemployment; occupational distribution of labour force; specifically on labour force engaged in manufacturing, arts and crafts; and of landless and non-cultivating labour force.
- C. Location and Infrastructure : Distance from road and railway station; distance from the nearest urban area and size of the urban area; population of villages in the vicinity.
- D. Level of Development : Total and per capita village income by industrial origin; agricultural productivity per unit of land and per worker.

#### Block II : Manufacturing Activity in the Village

- A. Structure of Manufacturing Activity : Product structure; traditional and modern industries; household and non-household using local and imported raw material; market, local and outside; ownership by caste, family occupational status, land-ownership.
- B. Employment Structure : By product groups; by age, sex, caste and occupational status of families; part-time and full-time; number of days, months in a year employed; unpaid family labour and hired labour; wages of hired labour.
- C. Capital and Technology : Total capital employed, machinery, tools and equipment; sources of procuring them, facilities for repair, servicing etc.

- D. Raw Material : Types, source, availability, problems, alternatives.
- E. Output and Income : Value of annual output for the last few years, paid out cost and value added; market price, income per unpaid family worker; income structure of households engaged in manufacturing by source.
- F. Market : Ultimate market, place of sales, . frequently of sales, agency to which sold; consumer, retailer, wholesaler, other middlemen, government agency etc; marketing cost, trends in market over the last few years, competition from urban products, reasons for non-competitiveness, if any.
- G. Public Assistance : Assistance from public institutions and government, if any; impact of the assistance, problems in availing it.
- H. Problems in Expansion : Raw materials; technology, market, competition, finance, skilled labour or any other (to be based on opinions as well as objective study).

No single source of data at the moment provides information on all these aspects. The problem with using data available from different sources is not merely that the objectives, scope, concept, coverage and time period differ from source to source, but also that if put together they do not make a complete picture of the rural industrial situation and aspects related with it.

### Adequacy of Data : An Assessment of AERC's Village Studies

Looking at various sources from which information on the various aspects outlined above could be available, we expected that the single source from which most of the information can be had was the Village Studies conducted by Agro-Economic Research Centres in different regions of the country from time to time. These studies provide data on the village economy in its various aspects. More or less standardised methodology has been used in all studies; and even though the years in which the studies were conducted differ, it poses no methodological problem to use each village study as an independent unit of observation for comparison across villages. The AERCs have been conducting village studies since 1954. The main purpose is to portray the structure of village economy and its functioning, and pattern of change primarily as an impact of creation of certain infrastructural facilities like irrigation and roads.

We could get hold of 72 such village studies conducted by the AERCs in different parts of the country, available in the Library of the Department of Economics and Statistics, Ministry of Agriculture, Government of India, mostly in mimeographed form. The distribution of villages studies is not necessarily representative of the rural



economy of the country to the extent the selection of villages is conditioned by the location and convenience of the AERCs and some purposive element in the selection process. Of the 72 villages 16 each are from West Bengal and Orissa, 11 from Assam, 10 from Bihar, 6 from Gujarat, 5 from U.P., 3 from Andhra Pradesh, 2 from Tamil Nadu and one each from Madhya Pradesh, Arunachal Pradesh and Rajasthan. Thus, 52 out of 72 villages are from the Eastern and North Eastern regions of the country only.

The village studies generally collected information on the following aspects relevant to the problem of rural industrial activity : (i) size and location, distance from transport head or road, and from the nearest urban centre along with size of the urban centre; (ii) Distribution of workforce by occupation-cultivators, agricultural labourers, workers in production other than cultivation; number of households/workers engaged in village industries; distribution of worker by primary and secondary occupation; (iii) Income per household by occupational group; (iv) Size distribution of holdings, cropping pattern--food and non-food crops; (v) Number and value of milch cattle, by occupational categories of households, (vi) tools, implements and machinery by size of land-holdings; repair and servicing facilities; (vii) Employment and earnings of workers in non-agricultural sectors;

(viii) Village income by industrial origin; (ix) Sources of income of households with arts and crafts as household occupation.

Thus, one can see that while information on certain macro-variables relating to the village is suitably available, but not much information is to be found on the production, technology, financing, marketing and other aspects of manufacturing units. In fact, in most of the village studies it is also not clear as to what type of industries exist in the village; only 'arts and crafts' or then 'manufacturing' is mentioned as an all-inclusive category. Even on village characteristics, while information on population, workers, location and distance from transport facility and some information on incomes and level of development could be had from village studies, the information to work out extent of unemployment and underemployment is not available in most of them. The structure of village economy can be gauged on the basis of employment structure in case of all villages studies; but it could be assessed on the basis of income by industrial origin only in case of 40 villages for which useable information is available. The relationship of the village economy with its industrial activity, in terms of use of raw materials, skills and local consumption cannot be studied in so far as the details of type of industrial activity, on procurement of raw material and sale of products are not available.

Still the village characteristics could be used to some extent for analysing the extent of manufacturing activity in the village in relation to certain macro-variables relating to the village. But information is generally lacking for studying the structure of village industries in terms of their products, intensity of labour use in terms of capital, technology, marketing and problems if any, faced by them in expansion. No details are available on the use of raw material, equipment, technology and consumption of rural industrial products. The one aspect on which usable information is available is the income per worker engaged in manufacturing activity in the village. But here again details are lacking for inter-industry and inter-product comparisons of productivity and income per worker. Nor is one able to standardise labour productivity figures for differences in number of days and months worked by different workers in manufacturing activity. Thus the data provided by the AERCs village studies is highly inadequate for an analysis of the structure, growth and performance of village industries with a view to assessing their potential and problems. It is not surprising in view of the fact that though the studies were supposed to be quite comprehensive in coverage of different aspects of village economy, the surveys were not particularly focussed on industrial activity and micro aspects of the working of the village industry units.



### Determinants of Rural Industrial Activity

It is worthwhile here to go beyond the mere assessment of adequacy of available data from village studies conducted by AERCs into some substantive questions as well. The questions that are important and can be answered with the help of usable data available in most village studies relate to the determinants of the extent of manufacturing activity in a village, and its income generating potential per worker engaged in them. As mentioned earlier, the issues relating to the growth and structure of rural industry units cannot be analysed due to non-availability of data.

The total workers in the 72 villages studied numbered 29,965 of which 1,790 were engaged in manufacturing activity. The manufacturing activity is found to yield a higher per worker income than other rural activities, so that although the percentage of workers in manufacturing comes to 5.97, income originating in this sector amounts to 7.79 per cent of total income of the villages. Income per worker in manufacturing estimates to Rs.2,149 per annum as compared to an average of Rs.1,875 in all activities together. Most of the villages, however, have only less than 5 per cent of their workers engaged in manufacturing; only 28 per cent villages and 10 per cent or more

of their workers engaged in this sector. Similarly, only 35 per cent villages have over 10 per cent of their income originating in manufacturing, another 35 per cent between 5 and 10 and 30 per cent less than 5 per cent.

It is interesting to note that the number of workers in industrial activity and per worker income are found to be consistently related (Table 1). Larger

Table 1

Employment Size and Income Per Worker From  
Manufacturing

Number of persons engaged in manufac- turing	Annual income per worker in manufac- turing
Less than 20	382.54
20 - 40	619.63
40 - 60	1594.25
60 - 80	4064.61
More than 80	4211.32
ALL villages	2149.40

the number of workers engaged in manufacturing in a village, higher is the average income derived from this

activity. Thus, it looks that for rural industrial activity to be viable it is necessary that it has a minimum size. Villages with over 60 workers each in manufacturing seem to give a reasonably higher income to those engaged in it.

From whatever little information is available about the structure of rural industries, we estimate that over 50 per cent of the workers in manufacturing are engaged in traditional arts and crafts and around 6 per cent each in carpentry, paddy husking and weaving. Those in traditional crafts and village industries earn very low income of around Rs.1000 per annum. The only activity which yields a reasonably high income is weaving; a worker engaged in this activity earns on an average Rs.7400 per annum. In other industries most of the workers are there probably simply because their families have been traditionally engaged in these activities, but demand for their products has not increased at the same rate at which the population of their families has increased.

It must be noted that most villages studied were rather small sized, average population of a village being around 750. One-third of the villages had a population of less than 500 persons and another one-third between 500



to 1000 persons. A large number of villages, over one-third, were at least 25 Km. away from the nearest railway station; only around one-fourth were located within 5 Km. of a railway station. But almost one-half of the village had pucca road passing through the village, although one-third villages had a pucca road at least two Km. away. Again, one-half villages had the nearest urban centre at least 10 Km. away and only 14 per cent within a distance of 5 Km. And in over one-half cases the nearest urban centre was a medium sized town and in 14 per cent cases a large sized one. In 28 per cent cases it was a small town.

Over 60 per cent of the holding were of less than 5 acres in two-thirds of the villages. The average man-land ratio was 0.50, villages equally distributed above and below the average. In terms of productivity per worker in cultivation most villages were either at the lowest end with less than Rs.1000 or at the highest end with over Rs.10000 as value output per worker; 35 per cent of the villages fell in each of the two categories and 30 per cent in between. Output per hectare was, however, found to be less than Rs.1000 in 45 per cent villages and above Rs.10000 in only 15 per cent villages.

Let us now relate the above locational and structural

aspects of the villages with the extent of industrialisation of villages. For the latter we have three indicators available from the village studies : percentage of workers engaged in manufacturing, percentage of village income originating in manufacturing and income per worker in manufacturing. We will examine the relationship of the village variables described above with each of these indicators.

Percentage of workers engaged in manufacturing in one of the simplest and direct indicators of industrial activity. As indicated earlier, this percentage came out to 5.97 in the villages studied as a whole (Table 2). To begin with, we presumed that larger a village, higher would be this proportion for the reason that a larger population would provide larger local market. This proposition, however, assumes that the rural industrial units produce goods mostly consumed locally. It, however, does not seem to be the case. Not only the percentage of workers engaged in manufacturing does not increase with increase in population size of a village, it does not even remain the same--it declines. While of the villages with a population of less than 500, 60 per cent have at least 5 per cent of their workers engaged in manufacturing

Table 2  
Population and Industrial Activity

Population	Percentage of workers engaged in manufactu- ring acti- vity	Percentage of income derived from manufactu- ring acti- vity	Annual income per worker from manufactu- ring acti- vity
Below 500	10.35	9.05	1652.95
500 - 1000	5.03	5.75	743.55
1000 - 1500	6.20	12.29	6430.61
Above 1500	2.46	3.82	367.23
TOTAL	5.97	7.79	2149.40

the percentage of such villages was only 37 among those with a population of 500 to 1000, and 25 per cent among those with a population above 1000. Average percentage of workers engaged in manufacturing comes to 10.35 per cent among the smallest villages with population of less than 500, 5.03 per cent among those with a population of 500-1000 each, 6.20 per cent among those with a population of 1000-1500 and 2.46 per cent among those with a population over 1500 each (Table 2). There are two possible explana-



tions of this unexpected phenomenon that came to our mind. One, most of the village industries are confined to traditional village crafts catering to the needs of village population, such as blacksmithy, carpentry etc., and a few persons in each craft are required in each village irrespective of its population and their number does not necessarily increase with the size of population. Second, the average size of villages in the sample is too low to expect the type of relationship we visualised. It seems necessary to have a minimum size of village before it could sustain a sizeable industrial activity. It looks that most of the villages studied are far below this threshold population and, therefore, the extent of industrial activity does not show any consistent and logical relationship with the population size.

Share of village income originating in manufacturing also shows similarly confused relationship with the size of population. One-third of the villages had over 10 per cent of their income originating in manufacturing, but average share of manufacturing income worked out to 9.05 per cent for the smallest villages, 5.75 per cent for the next size group (500-1000), 12.29 per cent in relatively large sized villages and 3.82 per cent

amongst the largest villages studied. Similarly, the lowest sized villages yielded an income of 1652.95 per annum to a manufacturing worker, the figure was only Rs.743.55 for the next population size, highest at Rs. 6430.61 for villages between a population of 1000 and 1500 and the lowest Rs.367.23 for the villages with a population of over 1500.

In case the material and output is transported from and to other places, the proximity to transport connection is obviously an important determinant of industrial activity in a village. We have distance from the railway station and from pucca road as the two indicators of this facility here. We find that closeness to a railway station shows no relation with the extent of industrial activity in a village : villages having a railway station within 2 Kms. have only 2.30 per cent of their workers engaged in manufacturing while those having a railway station at a distance of 2-5, 5-10, 10-20 and more than 20 Kms. have 5.82, 4.46, 13.73 and 6.10 per cent workers respectively engaged in manufacturing (Table 3). Percentage of village income originating in manufacturing as well as income per manufacturing worker in a village are consistently negatively related with proximity to the railway station. This, of course, should

Table 3

Distance from Railway Station and Industrial  
Activity

Distance from railway station (Kms)	Percentage of workers engaged in manufacturing activity	Percentage of income derived from manufactu- ring activity	Annual income per worker from manufactu- ring acti- vity
Below 2	2.30	1.21	207.5
2-5	5.82	3.75	351.42
5-10	4.46	7.76	626.68
10-20	13.73	12.97	2032.49
Above 20	6.10	9.85	5709.80
TOTAL	5.97	7.79	2149.40

obviously be a spurious relationship--a mere coincidence. This is no basis to suspect that income from manufacturing activity increases with distance from the railway station.

It seems that most of the village industry units do not use railway as a mode of transporting material and products; road is the most often used mode for this purpose. We find (Table 4) even though most of the villages had a road either within the village or within a distance



Table 4

Distance from Pucca Road and Industrial Activity

Distance from Pucca road (Kms)	Percentage of workers engaged in manufacturing activity	Percentage of income derived from manu- facturing activity	Annual income per worker from manufactu- ring acti- vity
In the village	5.38	9.86	2912.40
Upto 2 Kms.	8.89	8.07	2051.92
Above 2 Kms.	5.68	3.89	930.49
TOTAL	5.97	7.79	2149.40

of 2 Kms., the relationship between the availability of road and extent of industrial activity is quite discernible. It is not so clear in terms of percentage of workers engaged in manufacturing where it is found that villages having a road in the village or those having it at a distance of over 2 Kms. have similar extent of workforce in manufacturing while the villages with a road within 2 Kms. have a higher extent. But availability of road seems to make a significant difference in terms of income from manufacturing activity. Villages with road within have 9.86 per cent of their income originating in manufacturing, the

percentage in case of villages with road within 2 Kms. is 0.87 and for those with a road farther than 2 Kms. it is 3.89. Income per worker in manufacturing for the three groups of villages respectively estimates to Rs. 2912.40, Rs.2051.92 and Rs.930.49.

A more consistent relationship is found to hold between the distance from the nearest urban area and all the three indicators of rural industrial activity. It seems that the source of material and the market is provided by an urban area most often. The percentage of workers engaged in manufacturing gets consistently reduced as we move to villages further away from the urban area (Table 5). Similar relationship is held by the share of manufacturing in village income. Income per manufacturing worker in a village also declines consistently and sharply as we move to village with greater distance from the nearest urban area. All the relationships here are sharper than in the case of distance from the road. It, however, does not seem to matter whether the nearest town is big or small one (Table 6). In any case, the type and magnitude of goods produced by the rural industrial units do not probably require a sizeable urban centre for procurement of raw material and marketing the product. Thus the proximity to an urban area as such, irrespective of its size, seems important for the expansion and better performance of rural industrial activity.

Table 5Distance from Nearest Urban Area and Industrial Activity

Distance (Kms)	Percentage of workers engaged in manufacturing activity	Percentage of income derived from manufacturing activity	Annual income per worker from manufacturing activity
Below 5	8.42	12.52	5934.85
5-10	6.70	7.36	1642.75
10-20	5.29	3.50	428.02
Above 20	3.79	2.54	335.15
TOTAL	5.97	7.79	2149.40

Table 6Size of Nearest Town and Industrial Activity

Size of nearest town	Percentage of workers engaged in manufacturing activity	Percentage of income derived from manufacturing activity	Annual Income per worker from manufacturing activity
Small	6.61	3.77	646.46
Medium	5.60	9.74	3074.66
Big	4.70	7.52	296.88
TOTAL	5.97	7.79	2149.40



Let us now turn to the relation to structure of landholdings and levels of agricultural development with the extent of industrial activity in the villages. Structure of landholdings can affect the level of industrial activity in diverse ways. On the one hand if most of the landholdings are of small size a larger number of cultivators and landless labourers will be obliged to take up non-agricultural activities with a view to supplementing their incomes. But at the same time very small cultivators and the landless labourers may not have the necessary wherewithals to undertake such activities. And if a sizeable proportions of holdings are larger, the cultivators of this group may generate larger demand for non-agricultural products, encouraging manufacturing activities in the village, assuming that these activities produce goods for local consumption. Man-land ratio can also be expected to be similarly related with rural industrial activity : a greater burden on land may oblige small holders and landless workers to diversify into non-agricultural activities, but a lower man-land ratio, on the other hand, may lead to greater demand for manufactured goods.

The relationship between the structure of landholdings and extent of industrial activity in a village appears rather blurred in the case of villages studied here. Taking holdings smaller than five acres as a

percentage to total holdings as a single indicator of structure of landholdings, we find that villages with smaller percentage and those with larger percentage of such holdings do not differ significantly in terms of the proportion of workforce engaged in manufacturing activity (Table 7). It is, however, found that villages with a very high proportion of small holdings have larger proportion of income originating in manufacturing than those with smaller proportion of such holdings. On the other

Table 7

Percentage of Holdings Below 5 Acres and  
Industrial Activity

Percentage of holdings below 5 acres	Percentage of workers engaged in manufactu- ring activity	Percentage of income derived from manufactu- ring activity	Annual in- come per worker from manufactu- ring acti- vity
Below 60	6.00	6.58	2958.71
60 - 80	4.02	7.22	2002.47
Above 80	7.84	10.14	1702.74
TOTAL	5.75	7.54	2149.40

hand, the pattern of income per worker gives a different picture : in the villages with smaller proportion of small holdings workers engaged in manufacturing earn relatively higher than those in the villages with predominance of small holdings. It implies that though industrial activity makes a smaller proportion in the economy of villages with relatively larger number of large holdings it generates higher income per worker in these villages. On the other hand, the income per worker in manufacturing activity is found to be substantially higher in villages with greater man-land ratio (Table 8), although

Table 8

Man-Land Ratio and Industrial Activity

Man-land ratio	Percentage of workers engaged in manufacturing activity	Percentage of income derived from manufacturing activity	Annual income per worker from manufacturing activity
Below 0.50	6.63	7.99	1099.29
Above 0.50	5.13	7.23	3226.16
TOTAL	5.75	7.54	2149.40

the share of employment and income in industrial activity does not vary much between villages with low and high man-land ratio.



Levels of agricultural development as indicated by value of gross output per worker engaged in cultivation do not find a consistent relationship with the extent of industrial activity. In the group of villages where income per worker in cultivation is below Rs.1000 around 4 per cent of workers are in industrial activity; for villages with higher output per agricultural worker, this proportion is also higher, but does not consistently rise with increase in output level (Table 9). Income per

Table 9

Gross Output Per Worker in Cultivation and Industrial Activity

Gross output per worker in cultivation	Percentage of workers engaged in manufacturing activity	Annual income per worker from manufacturing activity
Below 1000	3.97	3449.79
1000 - 3000	9.22	1012.36
3000 - 6000	7.49	4484.33
6000 - 10000	12.49	2024.41
Above 10000	5.82	950.74
TOTAL	6.49	2149.40

industrial worker is also not found to have a consistent relationship with the agricultural productivity per worker. The implicit hypothesis underlying the postulated relationship was that higher productivity levels in

agriculture lead to greater diversification of economy and better incomes in non-agricultural activities. The data do not support the hypothesis probably because the level of agricultural output are too low in most villages to generate higher incomes necessary as threshold for the diversification of economy. The hypothesis did not hold also when the relationship was tried with output per unit of land (Table 10); in fact, a reverse relationship

Table 10

Gross Output Per Acre of Cultivation  
and Industrial Activity

Gross output per Acre of cultivation	Percentage of workers engaged in manufacturing activity	Annual income per worker in manufacturing activity
Below 1000	4.84	2423.50
1000 - 3000	16.85	4036.43
3000 - 6000	9.91	584.21
6000 - 10000	8.53	2280.07
Above 10000	5.31	204.49
TOTAL	6.49	2149.40

was noticeable in this case : villages with lower agricultural productivity had relatively higher income per manufacturing worker. May be low productivity of land obliges people in the village to seek manufacturing as a

source of income, while high agricultural productivity does not necessarily induce diversification of the village economy.

### Conclusion

On the whole, it is the group of variables relating to the location of the village which tends to explain the inter-village differences in the extent and income potential of the village industries. Proximity to road connection and urban centres seem most important determinants of the state of industrial units in the village. The characteristics of the village economy, including its population size and structure show no perceptible influence. The reasons for the absence of such a relationship may be sought at least in two circumstances. First, most of the villages may be so small sized that they do not provide the necessary minimum conditions to be the base for industrialisation. For the purpose of planning rural industrialisation it may, therefore, be necessary to group a few villages into a cluster so as to provide necessary infrastructure for development of industry and an adequate size of the market for the products used for rural consumption.<sup>17</sup>

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<sup>17</sup>Cf Rao, V.K.R.V., 'Industrialisation and Integrated Rural Development', Man and Development, Vol.I, No.2, pp.9-20.  
Vol.I



Second, the rural industries may be producing goods which do not show a positive elasticity in relation to the size and income level of the village. The number of carpenters, blacksmiths and cobblers need not necessarily increase at the same rate as village population if the existing persons in these crafts can well look after the increased needs. And higher incomes may lead to a change in demand pattern which with given technology and level of sophistication, village units are not able to meet. An analysis of 1973-74 consumer expenditure data from NSS reveals that of about 25 per cent rural household expenditure incurred on non-agricultural items, bulk is spent on items manufactured in the towns.<sup>18</sup> And it is likely that with increasing income levels the consumption pattern would grow more urban-biased. If village industries are to cater to the local needs, it seems necessary that technology of traditional industries is refurbished with a view to meeting new demands; and new products are introduced for manufacturing in the rural areas. An approach based on an emphasis on traditional products and technology is highly unlikely to succeed as a mode of rural industrialisation for income and employment generation.

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<sup>18</sup>Ibid., p.14.

The above findings and conclusions are, however, based on limited data, and are, therefore, general and tentative in character. Nevertheless, they may be found to have general validity. But they need to be examined in terms of the processes and causations underlying them for which we do not have the necessary data from the sources utilised here. We have already outlined earlier the pattern of data requirements needed for the proposed analysis. In short, in addition to the type of data used here, information is needed on the product structure, employment structure, raw materials, markets, capital and technology, finance, etc., of the rural industrial units in order to be able to study their performance and potential. Since, as has been argued earlier, the policy on rural industrialisation may be operating in a vacuum and on the basis of faith and belief, in the absence of such studies it is necessary that a programme of collecting information on the above aspects, preferably on regional basis, is undertaken to provide the necessary basis for formation of policies and programmes in this field.

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# Appendix I

## List of Villages Studied by AERCs Used in Our Study

Name of the Village	District	State	Year to which data relate
1	2	3	4
1. Ankodia	Baroda	Gujarat	1961
2. Ankodia	Baroda	Gujarat	1968
3. Afawa	Surat	Gujarat	1962
4. Rampura	Mehsara	Gujarat	1962
5. Patadia	Sabarkantha	Gujarat	1962
6. Oon	Surat	Gujarat	1964
7. Sutendi	Agra	U.P.	1956
8. Serai Jairam	Agra	U.P.	1957
9. Andawan	Allahabad	U.P.	1964
10. Pakam	Siang	Arunachal	1969-70
11. Kadari	Chattarpur	M.P.	1963
12. Dakshinsija	Birbhum	W.B.	1960
13. Dakshinsija	Birbhum	W.B.	1967
14. Kanrsar	Burdwan	W.B.	1958
15. Kanrsar	Burdwan	W.B.	1964
16. Nachangacha	24 Pargana	W.B.	1956
17. Bachangacha	24 Pargana	W.B.	1962
18. Jungul	Birbhum	W.B.	1958
19. Jungul	Birbhum	W.B.	1966
20. Kashipur	Bankura	W.B.	1956
21. Kashipur	Bankura	W.B.	1960
22. Golta	Hoogly	W.B.	1961
23. Golta	Hoogly	W.B.	1967
24. Habrubari	Goalpara	Assam	1971
25. Dharpur	Allahabad	U.P.	1964
26. Nandipahad	Nalgonda	A.P.	1959
27. Nandipahad	Nalgonda	A.P.	1968
28. Sikaro	Allahabad	U.P.	1964
29. Telibandh	Phulbani	Orissa	1957
30. Telibandh	Phulbani	Orissa	1962
31. Darlimunda	Kalahandi	Orissa	1958
32. Darlimunda	Kalahandi	Orissa	1963-64
33. Sihorwa	Champaran	Bihar	1959
34. Sihorwa	Champaran	Bihar	1966
35. Chinnalabudu	Visakhapatnam	A.P.	1969
36. Dispur	Kamrup	Assam	1955



Name of the Village	District	State	Year to which data relate
1	2	3	4
37. Dispur	Kamrup	Assam	1961
38. Sengipatti	Thanjavur	T.N.	1957
39. Sengipatti	Thanjavur	T.N.	1963
40. Gundurigora	Koraput	Orissa	1958
41. Gundurigora	Koraput	Orissa	1964
42. Samahuta	Shahabad	Bihar	1958
43. Samahuta	Shahabad	Bihar	1964
44. Loyera	Udaipur	Rajasthan	1961
45. Sahjapur	Birbhum	W.B.	1956
46. Mawtnum	Khasi & Jaintia Hills	Assam	1964
47. Kanther Terang	Garro Hills	Assam	1960
48. Banshidola	Garro Hills	Assam	1964
49. Hmunpui	Mizo	Assam	1965
50. Sahnapur	Birbhum	W.B.	1961
51. Moujampur	Shahabad	Bihar	1955
52. Moujampur	Shahabad	Bihar	1960
53. Kasoti	Cuttak	Orissa	1956
54. Kasoti	Cuttak	Orissa	1961
55. Binanoi	Cooch Behar	W.B.	1957
56. Binanoi	Cooch Behar	W.B.	1962
57. Govindapur	Puri	Orissa	1959
58. Govindapur	Puri	Orissa	1966
59. Anlajodi	Mayurbhanj	Orissa	1957
60. Anlajodi	Mayurbhanj	Orissa	1963
61. Jagiapada	Cuttak	Orissa	1959
62. Jagiapada	Cuttak	Orissa	1963
63. Tegheriartari	Kamrup	Assam	1957
64. Tegheriartari	Kamrup	Assam	1968
65. Kathaliacherra	Tripura	Assam	1961
66. Kathaliacherra	Tripura	Assam	1967
67. Laomal	Sambelpur	Orissa	1957
68. Laomal	Sambalpur	Orissa	1962
69. Ranabigha	Patna	Bihar	1956
70. Ranabigha	Patna	Bihar	1960
71. Keotjali	Santhal Pargana	Bihar	1959
72. Keotjali	Santhal Pargana	Bihar	1966

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12. MS Ashraf : *Economics of Cloth Printing in the Decentralised Sector*

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1. VB Singh, PD Shrimali, RS Mathur : The Problems of Select Urban Handicrafts in Uttar Pradesh (Summary of Project Report)
2. RS Mathur : Chikan Handicraf, Lucknow
3. VB Singh, RS Mathur : The PIREP : An Evaluation of Reoti and Bansdih Blocks (Summary of Project Report)
4. TS Papola : Planning for Employment : Some Observations
5. TS Papola : Rural Industries in U. P. : The Non-Household Sector
6. TS Papola : Industrialisation, Technological Choices and Urban Labour Markets
7. TS Papola : Rural Household Industries in Uttar Pradesh
8. TS Papola : Fiscal Devolution by Finance Commission : Plea for a Dynamic Approach
9. Report of the Seminar on Regional Patterns of Agricultural Development
10. Report of the Seminar on the Regional Seminar on Indian Youth
11. Bhanwar Singh : The Exchange Structure and the Process of Capital Accumulation in India
12. HS Verma : Service in Urban India : A Non-elitist Perspective
13. HS Verma : Family and Industrial Devetopment in India : Some Issues and Hypotheses
14. HS Verma : Character and Functioning of Ruling Parties and Working of Federal Polity in India
15. HS Verma : Studying Entrepreneurs and Entrepreneurship : An Examination of the Adequacy of Approaches Used
16. R Ramasubban : Health Care for the People : The Empirics of the New Rural Health Scheme
17. R Ramasubban : National Movements in Ex-Colonial Democracies : The Naga Impasse in India.
18. VN Misra and A Joshi : Performance of Agriculture in Semi-arid Region of U. P. : An Inter-District Analysis
19. TS Papola : Sex Discrimination of the Urban Labour Markets : Some Propositions Based on Indian Evidence
20. HS Verma : Study of Social Change in Independent Rural India : Critical Issues for Analysis of Fourth Decade
21. TS Papola, VN Misra : Labour Supply and Wage Determination in Rural Uttar Pradesh
22. TS Papola : Informal Sector : Concept and Policy
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